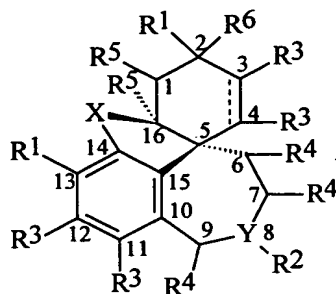


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## CLAIMS

1. The use of galantamine or a derivative thereof of formula I:



15

wherein the broken line represents an optionally present double bond between carbon atoms 3 and 4, each  $R_1$  is independently selected from hydrogen, hydroxyl, straight or branched chain alkyl, hydroxyalkyl, carboxyalkyl amino, alkylamino, acyl, lower alkanoyl, cyano, sulfhydryl,  $C_{1-6}$ alkoxy, alkylthio, aryloxy, arylthio,  $R_3$ -substituted aryloxy,  $R_3$ -substituted arylthio, aralkoxy, an optionally  $R_3$ -substituted aliphatic or aryl carbamyl group, aralkylthio,  $R_3$ -substituted aralkoxy,  $R_3$ -substituted aralkylthio, aryloxymethyl,  $R_3$ -substituted aryloxymethyl, alkanoyloxy, hydroxy-substituted alkanoyloxy, benzoyloxy,  $R_3$ -substituted benzoyloxy, aryloxycarbonyl and  $R_3$ -substituted aryloxycarbonyl,

$R_2$  is selected from hydrogen, straight or branched chain  $C_{1-6}$ alkyl, alkenyl or alkaryl group, optionally substituted by a halogen atom or a cycloalkyl, hydroxy, alkoxy, nitro, amino, aminoalkyl, acylamino, heteroaryl, heteroaryl-alkyl, aryl, arylalkyl, cyano, amyl, aroyl, cycloalkylmethyl, allyl, phenyl,  $R_3$ -substituted phenyl, alkylphenyl,  $R_3$ -substituted alkylphenyl, heterocyclyl

selected from  $\alpha$ - or  $\beta$ -furyl,  $\alpha$ - or  $\beta$ -thienyl, thenyl, pyridyl, pyrazinyl, and pyrimidyl, alkyl-heterocyclyl or R'-substituted heterocyclyl, where R' is alkyl or alkoxy,

5 each R<sub>3</sub> is independently selected from hydrogen, hydroxyl, sulfhydryl, alkyl, hydroxyalkyl, aryl, aralkyl, alkoxy, mercaptoalkyl, aryloxy, thiaryloxy, alkaryloxy, mercaptoalkaryl, nitro, amino, N-alkylamino, N-arylamino, N-alkaryl amino, fluoro, chloro, bromo,  
10 iodo, and trifluoromethyl,

each R<sub>4</sub> is independently selected from hydrogen, halo, trifluoromethyl or C<sub>1-4</sub>-alkyl,

each R<sub>5</sub> is independently selected from hydrogen or hydroxymethyl,

15 R<sub>6</sub> is hydrogen or C<sub>1-6</sub>alkyl, or when R<sub>1</sub> at carbon atom 2 is hydroxyl, R<sub>6</sub> may be a moiety of formula I wherein R<sub>6</sub> is hydrogen and R<sub>1</sub> is a linking bond; or

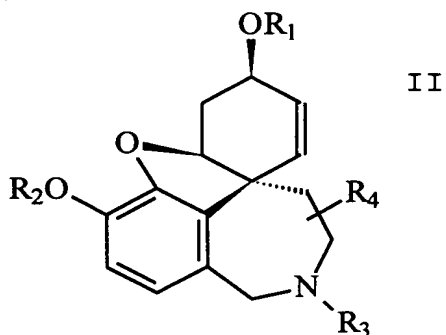
R<sub>1</sub> at carbon atom 2 and R<sub>6</sub> may jointly form semicarbazone,

20 X is oxygen or NR<sub>3</sub>,

Y is nitrogen or phosphorus,

and methylenedioxy derivatives thereof and pharmaceutically acceptable acid addition salts thereof  
in the manufacture of a medicament for combatting  
25 attention deficit disorders.

2. The use of galantamine or a derivative thereof of formula II



wherein R<sup>1</sup> and R<sup>2</sup> which may be the same or different each represents a hydrogen atom or an acyl group, such as a lower alkanoyl group, e.g. an acetyl group or a straight-chained or branched alkyl group, e.g. methyl, ethyl, propyl, or isopropyl;

R<sup>3</sup> is a straight or branched chain alkyl, alkenyl or alkaryl group which is optionally substituted by a halogen atom or a cycloalkyl, hydroxy, alkoxy, nitro, amino, aminoalkyl, acylamino, heteroaryl, heteroarylalkyl, aroyl, aroylalkyl or cyano group; and

R<sup>4</sup> represents a hydrogen or a halogen atom attached to at least one of the ring carbons of the tetracyclic skeleton,

and pharmaceutically acceptable salts thereof, such as a hydrobromide, hydrochloride, methylsulphate or methiodide in the manufacture of a medicament for combatting attention deficit disorders.

3. The use of galantamine or a salt thereof in the manufacture of a medicament for combatting attention deficit disorders.

4. The use is claimed in any one of claims 1 to 3 wherein the disorder is attention deficit hyperactivity disorder.

5. The use as claimed in any one of claims 1 to 3 wherein the disorder is a hyperkinetic disorder.

6. A method of combatting attention deficit disorders comprising administering galantamine or a salt or derivative thereof as defined in claim 1 or claim 2.

7. A method as claimed in claim 6 wherein the disorder is as defined in claim 4 or claim 5.

AMENDED SHEET